



*Entergy*

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1CAN120502

December 12, 2005

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

Subject: Licensee Event Report 50-313/2005-001-00  
Arkansas Nuclear One – Unit 1  
Docket No. 50-313  
License No. DPR-51

Dear Sir or Madam:

In accordance with 10CFR50.73(a)(2)(i)(B), enclosed is the subject report concerning operation prohibited by Technical Specifications.

New commitments contained in this submittal are summarized in Attachment 1.

Sincerely,

*Richard H. Scheide for*  
Dale E. James  
Manager, Licensing

DEJ/dh

attachment  
enclosure

*JE22*

cc: Dr. Bruce S. Mallett  
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U. S. Nuclear Regulatory Commission  
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**Attachment 1**

**1CAN120502**

**List of Regulatory Commitments**

List of Regulatory Commitments

The following table identifies those actions committed to by Entergy in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

COMMITMENT	TYPE (Check One)		SCHEDULED COMPLETION DATE (If Required)
	ONE- TIME ACTION	CONTINUING COMPLIANCE	
Chemistry procedures will be revised to ensure SPING-1 is not removed from service during fuel handling operations in the reactor building unless TS requirements are satisfied.	X		February 10,2006

**LICENSEE EVENT REPORT (LER)**

(See reverse for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

<b>1. FACILITY NAME</b> Arkansas Nuclear One – Unit 1	<b>2. DOCKET NUMBER</b> <b>05000 313</b>	<b>3. PAGE</b> <b>1 OF 3</b>
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**4. TITLE**  
Movement of Irradiated Fuel Assemblies in the Reactor Building with Reactor Building Purge Effluent Monitor Inoperable and Purge Isolation Valves Open Resulted in Operation Prohibited by Technical Specifications

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	13	2005	2005	- 001 -	00	12	12	2005		<b>05000</b>
									FACILITY NAME	DOCKET NUMBER
										<b>05000</b>

<b>9. OPERATING MODE</b>  6	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§:</b> (Check all that apply)									
<b>10. POWER LEVEL</b>  000	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)						
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)						
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)						
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)						
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER	Specify in Abstract below or in NRC Form 366A					
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)							

**12. LICENSEE CONTACT FOR THIS LER**

FACILITY NAME Arkansas Nuclear One / Dee Hawkins	TELEPHONE NUMBER (Include Area Code) 479-858-5589
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**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

<b>14. SUPPLEMENTAL REPORT EXPECTED</b> <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	<b>15. EXPECTED SUBMISSION DATE</b>	MONTH	DAY	YEAR

**ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)**

On October 13, 2005, during a scheduled refueling outage, with fuel offload in progress, super particulate iodine noble gas (SPING) effluent monitor, SPING-1, was removed from service for required surveillance testing. Operations personnel failed to recognize that Technical Specifications (TS) require SPING-1 to be operable when the reactor building purge isolation valves are open and fuel movement is in progress in the reactor building. Sampling was performed and SPING-1 was returned to service. On October 14, 2005, prior to removing SPING-1 from service again for sampling, operations personnel recognized that this configuration was not allowed with fuel movement in progress in the reactor building and realized that the removal of SPING-1 from service the previous day resulted in operation prohibited by TS. This event can be attributed to inadequate guidance regarding the TS requirement to maintain SPING-1 operability during fuel movement in the reactor building. Procedures will be revised to ensure SPING-1 is not removed from service during fuel handling operations in the reactor building unless TS requirements are satisfied.

**NRC FORM 366AU.S. NUCLEAR REGULATORY COMMISSION**  
(1-2001)

**LICENSEE EVENT REPORT (LER)**

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Arkansas Nuclear One – Unit 1	05000313	2005	001	00	2 OF 3

17. NARRATIVE (If more space is required, use additional copies of NRC Form 366A)

**A. Plant Status**

At the time this condition was discovered, Arkansas Nuclear One, Unit 1 (ANO-1) was in a scheduled refueling outage with fuel handling activities in progress in the reactor building [NH].

**B. Event Description**

ANO-1 Technical Specifications (TS) requires super particulate iodine noble gas (SPING) effluent monitor, SPING-1 [IL], to be operable when the reactor building purge isolation valves are open and fuel movement is in progress in the reactor building. If the SPING becomes inoperable, TS requires the movement of irradiated fuel to be suspended immediately. On October 13, 2005, SPING-1 was removed from service for 1 hour and 43 minutes, with fuel movement in progress in the reactor building. Fuel movement was not suspended as required.

SPING-1 is a self-contained microprocessor-based radiation detection system for monitoring particulate, iodine and noble gases in the reactor building ventilation system [VA]. On October 13, 2005, chemistry personnel requested permission from the control room to remove SPING-1 from service to perform surveillance testing in accordance with Off Site Dose Calculation Manual (ODCM) requirements. The ODCM requires weekly sampling of active effluent pathways. Although fuel offload was in progress at the time, operations personnel did not recognize that the removal of SPING-1 from service was prohibited by TS and granted chemistry personnel permission to remove SPING-1 from service for sampling. Sampling was performed and SPING-1 was returned to service.

On October 14, 2005, chemistry personnel again requested permission to remove SPING-1 from service for sampling. At this time, operations personnel in the control room recognized that this configuration was not allowed with fuel movement in progress in the reactor building. Operations personnel further realized that the removal of SPING-1 from service the previous day was performed during fuel movement, thus resulting in operation prohibited by TS.

**C. Root Cause**

This event can be attributed to inadequate guidance regarding the TS requirement to maintain SPING-1 operability during fuel movement in the reactor building.

The chemistry procedure used to perform sampling of Unit 1 vents did not require verification that fuel movement was not in progress in the reactor building prior to the removal of SPING-1 from service.

The TS requirement for SPING-1 to be operable to maintain the reactor building purge isolation valves operable during fuel movement was not common knowledge among the operations staff.

NRC FORM 366A U.S. NUCLEAR REGULATORY COMMISSION  
(1-2001)

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Arkansas Nuclear One – Unit 1	05000313	2005	001	00	3	OF 3

## 17. NARRATIVE (If more space is required, use additional copies of NRC Form 366A)

## D. Corrective Actions

Chemistry procedures will be revised to ensure SPING-1 is not removed from service during fuel handling operations in the reactor building unless TS requirements are satisfied.

The requirement to verify SPING-1 operability was clarified in operations procedure 1502.004, "Control of Unit 1 Refueling," Attachment B, to ensure the TS requirement for maintaining the SPING operable during refueling operations is met.

This event was incorporated into the operations continuing training program to increase operator cognizance of the requirement to maintain SPING-1 operable during fuel handling in the reactor building when the reactor building purge valves are required to be operable.

## E. Safety Significance

Spent fuel assemblies are handled entirely under water. Before refueling, the boron concentrations of the reactor coolant and the fuel transfer canal water above the reactor are increased so that, with all control rods removed, the core will not become critical. Although mechanical damage to the fuel assemblies during transfer activities is improbable, a mechanical damage type of accident is considered the maximum potential source of activity release during refueling operations. The offsite dose consequences from gases released during a fuel handling accident directly to the atmosphere with no filtration, assuming the reactor has been shut down for 100 hours (TS prohibits fuel handling operations prior to this time), will not exceed 25 percent of 10CFR100 limits. Therefore, this condition had minimal safety significance.

## F. Basis for Reportability

Technical Specification 3.9.3 requires each penetration providing direct access from the reactor building atmosphere to the outside atmosphere to be capable of being closed by an operable reactor building purge isolation valve with the purge exhaust radiation monitoring channel operable. With a reactor building penetration not in the required status, movement of irradiated fuel assemblies within the reactor building is to be suspended immediately. Movement of irradiated fuel assemblies on October 13, 2005, with SPING-1 inoperable resulted in operation prohibited by TS. This report is submitted in accordance with 10CFR50.73(a)(2)(i)(B).

## G. Additional Information

There have been no previous similar Licensee Event Reports submitted by ANO.

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].